

WASHINGTON  
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COORDINATING BOARD

May 2008

## **Master of Science in Dental Hygiene Eastern Washington University**

### **Introduction**

Eastern Washington University (EWU) seeks approval to offer a Master of Science in Dental Hygiene degree program, to be administered by the Department of Dental Hygiene in the College of Science, Health, and Engineering. Beginning in fall 2008, this Web-based program would enroll ten FTE students, growing to 30 FTE students by 2010. It would prepare students for careers as educators, administrators, researchers, or consumer advocates. At full enrollment, it would be the largest master's degree program in dental hygiene in the nation.<sup>1</sup>

### **Relationship to Institutional Role and Mission and the Strategic Master Plan for Higher Education**

The proposed program would support EWU's role as a "student-centered, regionally based, comprehensive university" by responding to the needs of place-bound students. For years, the department has offered a Bachelor of Science in Dental Hygiene, including bachelor's degree completion programs at Clark College, Pierce College, Shoreline Community College, Yakima Valley Community College, and Columbia Basin College. The proposed program would carry on this tradition of service to place-bound students and extend it to the graduate level. In addition, the proposed program would support the *Strategic Master Plan for Higher Education* by expanding postsecondary degree access in a health science field.

### **Diversity**

To supplement the services available through EWU's campus-wide diversity initiative, program planners would develop recruitment and retention strategies responsive to the specific needs and barriers of minority groups, including the following:

- Designing marketing materials for the program which emphasize diversity, distributing them to various minority organizations via mail and on-line, and working with professional and civic (including tribal) organizations to get word of the program out to students of color, and advertising in minority news media;

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<sup>1</sup> Most other institutions with master's programs for dental hygienists admit three or fewer students per year.

- Consulting with diverse students and faculty on campus, as well as other potential external stakeholders to ensure that the program's Web-based marketing and course material is helpful to diverse applicants and students;
- Developing a discussion rubric to be used in Blackboard courses (since so much of the program's coursework takes place on a discussion board) that includes a component regarding being culturally sensitive and respectful; and
- Reviewing best practices for identifying potential hires from underrepresented groups at the beginning of every faculty search;
- Maintaining faculty commitment to diversity training (e.g., all current faculty would have had diversity training prior to searching for undergraduate faculty);
- Coordinating diversity efforts with EWU's offices of minority student programs;
- Continually monitoring the program's culture of appreciation and respect towards diversity, including annual evaluation; and
- Continual improvement of the program's diversity efforts.

## Program Need

The HECB's *State and Regional Needs Assessment Report* recommends that institutions of higher education develop strategies to increase the number of students prepared to fill positions in high-demand areas including health care occupations. In addition, it recommends expansion of existing strategies in health care and the development of new programs and/or delivery mechanisms to meet student and employer demand.

To measure student demand for the proposed program, its planners mailed an interest survey to all licensed dental hygienists in Washington State. Out of 4,344 people surveyed, 869 responded, of which 228 indicated an interest in beginning an on-line Master of Science in Dental Hygiene within two years; 250 indicated an interest, but not at this time. In addition, program planners e-mailed an interest survey to current EWU students, alumni, and degree completion program alumni. Out of 309 people surveyed, 118 responded, of which 14 plan to apply for the proposed program this fall, 31 more plan to apply within two years, and 59 more plan to apply by fall 2013.

Program planners estimate that the most popular employment option graduates would seek would be to work as faculty or administrators in dental hygiene programs at institutions of higher education. Consequently, in assessing employer demand for the proposed program, planners focused on faculty vacancies. According to a 2003 American Dental Education Association report highlighting faculty vacancies in allied dental programs,<sup>2</sup> 68 dental hygiene programs (out of 188 responding) had faculty vacancies, of which 77 percent were mainly attributable to faculty retirement. Furthermore, according to a 2007 *Journal of Dental Education* article, 56 percent of current dental hygiene educators expect to retire within 10 years and 27 percent expect to retire by 2012.

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<sup>2</sup> Allied dental programs are programs in dental hygiene, dental assisting, and dental laboratory technology.

The employer demand attributable to faculty vacancies in existing programs is augmented by the addition of new programs. The U.S. Bureau of Labor Statistics projects that demand for dental hygienists will increase 27 percent or more by 2014. To prepare for this increased demand, more dental hygiene education programs are opening in community and technical colleges across the U.S. Washington is no exception, with two new dental hygiene programs opening in community and technical colleges during the last five years and one more scheduled to open in fall of 2009.

In order to supplement national level employer demand data cited above, program planners surveyed institutions of higher education in Washington State regarding their hiring needs for faculty and administrators over the next ten years. The survey found that Washington State institutions would need 7 administrators and 17 full-time faculty, of which 4 administrators and 12 full-time faculty would be needed from 2010 on, which is when graduates of the proposed program would be looking for jobs.

The program would respond to community need in at least a couple of ways. First, communities throughout the state would benefit from dental hygienists who were trained by faculty holding a master's degree. Currently, many dental hygienists are trained by faculty holding only a bachelor's degree, but a 2005 American Dental Hygiene Association report, "Focusing on Advancing the Profession," recommends a Bachelor of Science degree as the entry-level degree for dental hygienists. This initiative would increase community demand for more master's degree holders, because the Commission on Dental Accreditation requires faculty to hold a degree higher than the degree sought by the students they teach. In addition, communities may benefit from the students in the program because some of their applied research projects would focus on underserved communities and underinsured populations.

Finally, the proposed program would not duplicate any existing program in Washington State. Although the University of Washington offers a Master's Program in Oral Biology for Dental Hygienists, its focus is more specific. EWU and UW plan to collaborate in offering practicum and elective courses for students interested in pursuing an education/clinical emphasis in the proposed program. The courses would be offered at the Seattle campus and would provide an opportunity for students in the Puget Sound region to obtain face-to-face instruction through the UW's School of Dentistry, School of Medicine, Seattle Cancer Alliance, Institute on Aging, and School of Public Health and Community Medicine.

## **Program Description**

To be eligible for admission to the program, students must: hold a BS degree from an accredited dental hygiene program in the U.S. or Canada; have successfully completed the Dental Hygiene National Board Examination or its Canadian equivalent; hold a current U.S. or Canadian dental hygiene license and CPR certification; submit an essay; submit GRE scores; have an undergraduate GPA of 3.0 or higher; and clear a criminal background check.

Once admitted, students would complete 62-67 credits, including a 56-61 credit core and 6 credits of electives in an emphasis area chosen by the student to tailor the program to his or her interests. Students entering the program would start off with an in-person week-long course in

Advanced Dental Hygiene Practice, which would expose them to the profession's latest technology. After that, core didactic courses would be offered 100 percent on-line via Blackboard Web-based software. Courses would be taught sequentially and offered only once per year, and students would take from two years (full-time) to six years (part-time) to complete the program.

Core coursework would consist of:

- Advanced Dental Hygiene Practice (2 credits)
- Healthcare Leadership (3 credits)
- Translational Research (5 credits)
- Theoretical Foundations of Advanced Dental Hygiene Practice (5 credits)
- Advanced Dental Hygiene Research/Technical Writing (5 credits)
- Educational Methodology (3 credits)
- Components of Program Development (5 credits)
- Advanced Educational Theory and Methods (5 credits)
- Clinical Administration and Teaching (3 credits)
- Practicum I and Practicum II (5 credits each)
- Thesis (10-15 credits)

In addition, a minimum of six credits of elective courses would be required in either of two emphasis areas: education/administration or education/clinical. The electives could be taken either at EWU or other institutions, subject to approval by the program director.

During their second year of study, students would complete ten practicum credits and would have the option of either completing a thesis or completing a graduate research project instead of a thesis. At the end of the program, the student would return in person to Riverpoint to either defend the thesis or present the research project.

By completing the requirements of the proposed program, students would learn to:

- Be technically, intellectually, and ethically prepared for the upcoming challenges facing the dental profession;
- Possess critical thinking skills that help them to be community leaders and outstanding citizens;
- Possess skills needed to be health care professionals who can provide comprehensive care to diverse population groups in a variety of settings; and
- Have the perpetual self-learning capacity to live up to their full potential and to contribute to making their community, profession, and world a better place.

Students would be assessed within their individual courses, based on learning outcomes identified for those courses. Assessments for each course have been identified and aligned with the program-level learning outcomes listed above. Student assessments include: projects, professional portfolio development, case studies in research and leadership, research reports,

self-assessment papers, professional issues papers, writing an article suitable for publication, group projects, development of lesson plans by students, curriculum development by students, participation in teaching at a host institutions, and thesis development and defense.

Overall program assessment would rely on a variety of tools, including: annual meeting of an advisory board to review the program, triennial survey of employers, triennial survey of alumni, annual survey and interview of exiting students, quarterly student course evaluations to assess student satisfaction with content and pedagogical approach, student focus groups, on-line integrative approaches to gathering student feedback via Blackboard courses while students take each course, surveys of community partners and project clients to measure satisfaction with student performance and professionalism, and formalized review of student portfolios to assess preparation and career readiness. Data from each tool would be used to refine the program as needed. For example, course evaluations would be used to examine course content and its relevance to the larger program. Exit surveys would be used to assess students' skill preparation, knowledge of core learning areas, and readiness for an advanced professional career.

The program would not seek specialized accreditation because none is available for graduate level programs in dental hygiene.

## **Program Costs**

The proposed program would enroll 10 FTE students in the first year, growing to 30 FTE students by the third year. To implement the program at full enrollment, the Department of Dental Hygiene has budgeted 1.0 FTE for administration and 2.25 FTE for faculty, which includes 2.0 FTE for faculty yet to be hired. Core courses would be taught by full-time tenure track faculty, who would hold at least a master's degree.

The proposed program would use existing Blackboard Web-based software; and because of the existing off-campus degree completion programs, the infrastructure for off-campus use of EWU's library and databases is already in place. However, the program would need additional office space at Riverpoint for new faculty.

The proposed program would be state-funded, through a combination of high-demand funds and internal reallocation, with limited impact on other EWU departments or programs.

With an entering class of 10 FTE, the total budget for the first year of the proposed program would be \$192,999 or \$12,867 per FTE. At full enrollment of 30 FTE by the third year, the total budget would be \$275,972, or \$9,199 per FTE. This is on the high end of the range of average cost per FTE for graduate students majoring in health science at comprehensive institutions. According to the HECB's *2005-06 Education Cost Study* (July 2007), the direct cost of instruction per average annual health science graduate student FTE at comprehensive institutions ranged from \$5,459 at Eastern Washington University to \$8,070 at Western Washington University. However, it should be noted that the proposed program projects a relatively low student/faculty ratio of 13.3. In comparison, the health science graduate student/faculty ratios reported in the cost study ranged from 17.3 at Eastern Washington University to 17.8 at Western Washington University.

## **Public Comment**

During the Planning Notification of Intent comment period, Dr. Martha Somerman, Dean of the University of Washington's School of Dentistry, submitted a comment letter noting that a 100 percent on-line curriculum would be unlikely to provide the top-notch clinical training that future educators would need, and she suggested that the proposed program might benefit from an inter-institutional collaboration between EWU and UW.

Program planners responded by entering a collaborative arrangement with UW to deliver electives and practicum in the Puget Sound region, and they surveyed existing master's programs nationwide to determine the extent of their clinical components. The survey indicated that 8 out of 12 master's programs did not require a clinical component. Subsequently, the HECB received a letter from Dr. Somerman supporting the program and an e-mail confirming that her prior concerns had been resolved.

## **External Review**

Two external reviewers reviewed the program: Ms. Kim Bray, Professor and Director, Division of Dental Hygiene, School of Dentistry, University of Missouri-Kansas City; and Dr. Juanita Wallace, Chair, Department of Dental Hygiene and Assistant Dean for Faculty and Staff Development, University of Texas Health Science Center at San Antonio.

Both reviewers made positive comments about the program. Ms. Bray noted that the proposal was inclusive of the breadth and depth of peer program curricula, the specific goals of the program were well articulated, the learning objectives were appropriate and well defined, and the student and program assessments were consistent with those established for the discipline. Ms. Bray further noted that the on-line delivery model would be critical to the success of the program. Dr. Wallace, who strongly supported the proposal, was very impressed with overall program design, curricular components, and on-line delivery. Dr. Wallace also found the program to be well thought out and innovative in meeting the profession's and community's needs.

Both reviewers worried about program capacity. Dr. Wallace noted that hiring additional faculty would be essential, and even with new hires, the number of faculty available to serve on multiple committees was small, which could lead to faculty overload and burn out. She suggested starting with a smaller number of students the first year. Program planners responded by lowering year one student FTE from 20 to 10 and full enrollment student FTE from 50 to 30 in the final proposal. Ms. Bray questioned whether the program could support research for so many students. She suggested that program planners document graduate level faculty with a publication record to support research requirements.

## Staff Analysis

The proposed program would support both the *Strategic Master Plan for Higher Education* and EWU's role in the state's higher education system by expanding place-bound students' access to postsecondary degrees in a health science. In addition, the proposal includes a thoughtful and appropriate diversity plan. Furthermore, the program clearly would not duplicate existing programs in Washington.

Program planners provided extremely strong evidence of student demand for the proposed program through multiple surveys of potential student populations. The evidence suggests that enough students would enroll to sustain the largest master's level program in the nation. There is sufficient evidence of community demand for the proposed program as well. Unfortunately, the evidence for employer demand is not as strong.

The proposal focused on assessing employer demand in one occupational area: dental hygiene education. Consequently, employer demand in other occupational areas is unsubstantiated. Moreover, an employer survey suggested that 10 years worth of Washington State's employment needs for dental hygiene educators could be satisfied by 16 of the program's graduates, which is about the size of a single cohort. On the other hand, Bureau of Labor Statistics data and American Dental Education Association reports suggest strong and growing national employer demand for dental hygiene educators, so maybe graduates unable to get dental hygiene educator jobs in Washington could find them in other states.

Based on the existence of at least some evidence for community and employer demand for the program and the existence of overwhelming evidence for student demand for the program, HECB staff will not withhold its recommendation for program approval on the grounds of insufficient need for the program. However, HECB staff recommends that the Department of Dental Hygiene track employment of its graduates closely, surveying alumni and employers annually rather than triennially, and that it consider limiting its program size if it finds that graduates aren't gaining appropriate employment.

Reviewer comments indicate that the program's curriculum is appropriate and that its Web-based delivery is an asset. Neither reviewer felt that the program's limited in-person clinical component (one week at the beginning of the program) was insufficient or inappropriate. Program planners presented strong evidence that learning assessments for each course would be clearly defined and aligned with program-level learning outcomes.

The program would be taught by full-time tenure track faculty, but the program is heavily dependent on new hires. Based on e-mail correspondence with program planners, it seems likely that the new hires would be recent graduates of master's programs in other states and would not be experienced in mentoring students with graduate-level thesis or non-thesis research project work. Furthermore, the graduate level thesis mentoring experience of faculty currently employed by EWU's Department of Dental Hygiene is limited.

When HECB staff raised concerns about the capacity of faculty to mentor graduate students, program planners responded that the thesis is an option rather than a requirement and that relatively few students would elect to complete a thesis. Program planners have committed to try to find an experienced faculty member (within or outside the department) to serve on each thesis committee and to work towards a faculty mentoring system whereby faculty inexperienced in working with graduate student theses or research projects would be mentored by experienced outside faculty.

### **Staff Recommendation**

After careful review of the proposal and supporting materials, staff recommends approval of the Master of Science in Dental Hygiene at Eastern Washington University. The HECB Education Committee discussed the proposal during its May 5, 2008 meeting and recommended approval by the full Board.



**RESOLUTION 08-14**

WHEREAS, Eastern Washington University proposes to offer a Master of Science in Dental Hygiene; and

WHEREAS, The program would be primarily Web-based and support both the *Strategic Master Plan for Higher Education* and the role of Eastern Washington University by expanding place-bound students' access to postsecondary degrees in a health science; and

WHEREAS, The program includes an appropriate diversity plan; and

WHEREAS, The program would respond to demonstrated student, employer and community need by preparing graduates for careers as educators, administrators, researchers or consumer advocates; and

WHEREAS, The program would not duplicate existing programs in Washington; and

WHEREAS, Students would benefit from the program's proposed collaboration between Eastern Washington University and the University of Washington; and

WHEREAS, The program features thorough and multifaceted assessment approaches;

THEREFORE, BE IT RESOLVED, that the Higher Education Coordinating Board approves the Master of Science in Dental Hygiene at Eastern Washington University, effective May 22, 2008.

Adopted:

May 22, 2008

Attest:

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Bill Grinstein, Chair

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Roberta Greene, Secretary